

Health Services in Schools Policy Brief

Stanford Health Services in Schools Project

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School-based Vision and Hearing Screening: Highlights from a Nurse Demonstration Project

Introduction

In the fall of 2015 an estimated 50.1 million students will attend public schools in the US.¹ Of those 51% will be of low-income families², and students from low socio-economic backgrounds have higher incidence of poor health and unmet health needs and could contribute to an academic achievement gap.³ Nearly 50% children from low-income families have vision problems that interfere with their academic performance.⁴

The American Academy of Pediatrics recommends screening tests for all school-age children as a way to promote health, detect disease and prevent injury and future health problems,⁵ yet, school-based health screening requirements vary by state.⁶ One of the objectives of Healthy People 2020 is to reduce visual impairment due to uncorrected refractive error by 10% among 12 years old and older.⁷

School Health Screening in California

The California Department of Education supports school health nursing services to provide mandatory vision and hearing screening.⁸ According to California's Education Code, students are screened for vision at enrollment (usually kindergarten), and subsequently at least every third year after that till the completion of 8th grade.⁹ Hearing screening is conducted in kindergarten/first, second, fifth, eighth and tenth/eleventh grade.¹⁰

Effectiveness of School Based Screening Programs

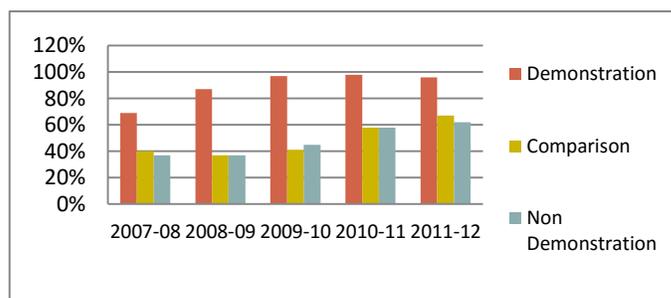
School-based vision and hearing screening can be an effective way to detect early visual and auditory impairments and remove barriers to academic success at school only if adequate follow up is available.¹¹ While limited literature is available on the impact of vision and hearing screenings follow up, a study from eight New York schools reported increased usage of corrective glasses in classrooms after students screened for vision problems were followed up.¹² In ten North Carolina schools, students referred for vision problems received timely treatment when

school nurses were actively involved in regular follow up with parents and providers.¹³

Screening and Follow-up in the Nurse Demonstration Project

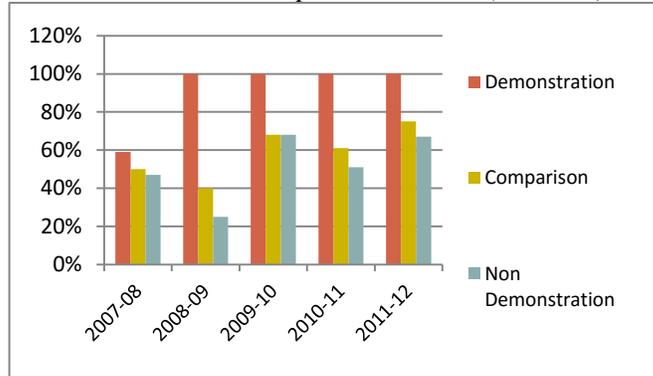
The "Putting Healthcare Back into Schools" Nurse Demonstration Project¹ was a six-year project to provide full-time, credentialed school nurses, at four underserved elementary and middle schools, and a nurse practitioner based at School Health Clinics of Santa Clara County in the San Jose Unified School District (SJUSD). One of the objectives of the project was to increase the rate of screening and follow-up conducted by school nurses. Four demonstration schools (two elementary and two middle schools serving 2785 children) with full-time nurses were matched with five comparison schools (four elementary and one middle school serving 3445 children) where nurses were hired on a part-time basis. All the nurses were trained to perform vision and hearing screenings, but only full-time nurses were able to provide comprehensive follow-ups. By the final year of its implementation (2011-12), the rates of screenings that had follow ups with vision specialists had improved in demonstration schools compared to similar schools that had part-time nurses. In 2011-12, 96% of 1150 students screened and referred for possible vision problems were examined by a health care provider, compared to 67% of 1334 students screened and referred for follow up in comparison schools (Figure 1).

Figure 1. Students with Vision Problems Examined by Health Care Specialist After Nurse Referral in Demonstration and Comparison schools (2007-12)



Similarly, 100% of students screened and referred for possible hearing problems were seen by a specialist in demonstration schools, as compared to 75% in comparison schools (Figure 2).

Figure 2. Students with Hearing Problems Examined by Health Care Specialist After Nurse Referral in Demonstration and Comparison schools (2007-12)



Additionally, teachers in demonstration elementary schools were very satisfied with the presence of full time nurses and reported that vision and hearing screenings and follow up were the most beneficial activities performed by the nurses.

Policy Implications

Conducting timely screening tests for vision and hearing in school-based settings can specially benefit low-income students who may otherwise lack health insurance and access to care.¹⁴ Having school nurses ensure appropriate referrals and follow up with health professionals can avoid occurrence of chronic health problems and disability for these children. There is a growing need to offer the services in schools so that all students get an opportunity to achieve at school. School nurses can play a pivotal role in providing these preventive services in a cost-effective manner and districts and health departments should work together to assure school-based health screening services for all students.

Recommendations

Schools provide an ideal setting to conduct health screenings. School authorities should target improving screening rates to reach recommended national levels and ensure standardized quality health screenings and follow up with parents and health care professionals.

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¹⁰ California School-based Health Alliance (2015). List of mandated health services. Accessed on August 12, 2015 <http://www.schoolhealthcenters.org/start-up-and-operations/school-health-program-models/mandated-health-services/list-of-mandated-health-services/>

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